## **ABSTRACT**

Interpreting data obtained by analysis of nucleic acids (DNA) by obtaining nucleic acid data in a spatial domain, transforming the nucleic acid data from the spatial domain into a frequency domain, and obtaining sequence data of the nucleic acid data by executing a data mining process on the transformed nucleic acid data. The transformation may be performed by a Hadamard transform, a Fourier transform or a Wavelet transform to obtain frequency coefficients, with less than all of the frequency coefficients being utilized in the data mining process. In addition, the frequency domain data may be normalized prior to the data mining process. data mining process may be subjecting the frequency coefficients to a connectionist (neural network) algorithm or to a classification tree/rule induction (CART) algorithm.

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